

EXTENDED ISOMAP USING FISHER LINEAR DISCRIMINANT AND KERNEL FISHER LINEAR DISCRIMINANT

ABSTRACT OF THE DISCLOSURE

[0064] A method for representing images for pattern classification extends the conventional Isomap method with Fisher Linear Discriminant (FLD) or Kernel Fisher Linear Discriminant (KFLD) for classification. The extended Isomap method estimates the geodesic distance of data points corresponding to images for pattern classification, and uses pairwise geodesic distances as feature vectors. The method applies FLD to the feature vectors to find an optimal projection direction to maximize the distances between cluster centers of the feature vectors. The method may apply KFLD to the feature vectors instead of FLD.